

A new species in the genus *Palpomyia* (Diptera: Ceratopogonidae) from Qinghai Province, China

Jing HE^{1①}, Zengjia LIU², Yixin YU³

1. College of Forestry, Gansu Agricultural University, Lanzhou, Gansu 730070, China 2. Center for Disease Control and Prevention of Lanzhou Military Command, Lanzhou, Gansu 730020, China 3. Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing 100071, China

Abstract: Specimens of Ceratopogonidae were collected from the Nachitai District of Qinghai Province. Among them, a new species of the genus *Palpomyia* was discovered and named *Palpomyia nachitai* He, Liu and Yu sp. nov.

Key words: Culicoidea; biting midges; taxonomy

青海须蠓属一新种（双翅目：蠓科）

何静^{1①}，刘增加²，虞以新³

1. 甘肃农业大学林学院，甘肃 兰州 730070；2. 兰州军区疾病预防控制中心，甘肃 兰州 730020；3. 军事医学科学院微生物流行病学研究所，北京 100071

摘要：在整理青海纳赤台地区采获的一批蠓科昆虫时，发现须蠓属 *Palpomyia* 1 新种，命名为纳赤台须蠓 *Palpomyia nachitai* He, Liu and Yu sp. nov.。

关键词：蚊总科；蠓虫；分类

Introduction

Thirty three species of the genus *Palpomyia* are found in China but only 4 species occur in Northwest China. Among these, 3 species were found in Nachitai District of Qinghai Province. During examination of the Ceratopogonidae, a new species in the genus *Palpomyia* was discovered in Nachitai District. It is described as follows.

Taxonomy

Palpomyia nachitai He, Liu and Yu sp. nov. (Figs. 1–8)

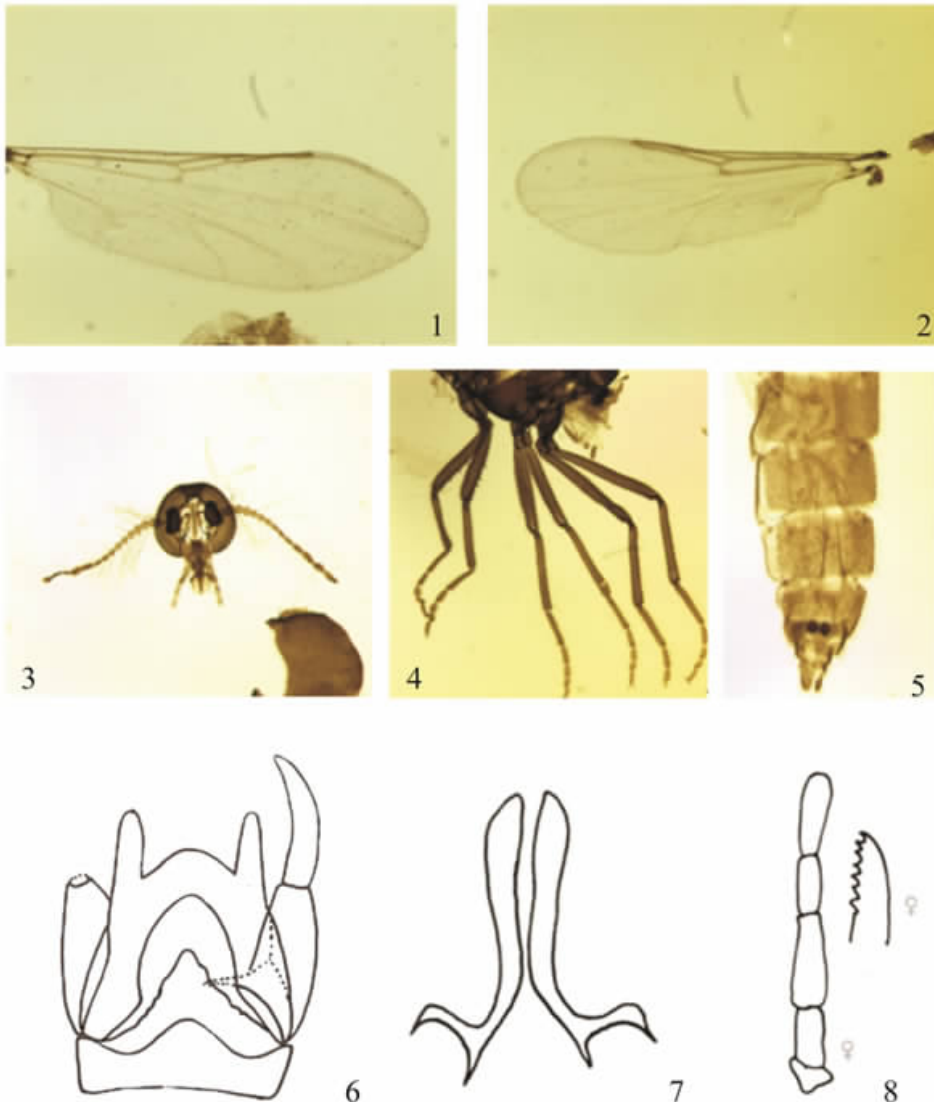
Medium to large, dark brown, distal four segments of male's antenna distinctly elongated, 13th segment slender, AR1.52. Hind tibia with 4 terminal bristles and 17 comb teeth. Hypopygium short, aedeagus triangular, dististyle blunt and curved at the end. Paramere elbow-shape, base slender, like a garden shear. The distal five segments of female's antenna distinctly elongated, 12th and 13th segment slender, AR1.03. Mandible with

Accepted 21 March 2016. Published 25 March 2017. Published online 17 March 2017.

① Corresponding author, E-mail: hejing268@aliyun.com

7 teeth. 3 spines on fore femur and tibia; hind tibia with 6 terminal bristles and 19 comb teeth. Two spermatheca, subequal, nearly spherical with short necks.

Male. Wing length 1.76 mm, breadth 0.57 mm. Head: with compound eyes continuous above, separated by width of 3 ommatidial facets but not pubescent; antenna uniformly dark brown, sparse macrotrichia, the distal four segments distinctly elongated, 13th segment slender, relative lengths of all flagellar segments 39: 15: 15: 15: 15: 15: 15: 16: 18: 22: 25: 25: 35. AR 1.52. Antenna 5-segmented, relative length of palp segments 8: 15: 23: 18: 20. Mandible with 7 teeth.



Figures 1–8. *Palpomyia nachitai* He, Liu and Yu sp. nov. 1. Female wing; 2. Male wing; 3. Male head; 4. Male legs; 5. Female abdomen; 6. Male terminalia (removing parameres); 7. Parameres; 8. Palp and mandible.

Thorax pale brown, without spots. Scutellum with seven strong bristles. Wing with no irregular greyish black markings or macrotrichia. Legs uniformly dark brown, 3 spines on fore femur and tibia. Claw of fore-, mid-, and hind-legs of equal length, not forked at apex. Hind tibia with 4 terminal bristles and 17 comb teeth. TR and FT of all legs as follows:

Abdomen uniformly brown, hypopygium short, basal arms broad and short, slightly extended posteriorly, apical segment at basal portion thick, tapered at distal 2/3, apical segment shorter than coxa. Aedeagus nearly triangular, dististyle blunt and slightly curved at the end. Paramere elbow-shaped, base slender like a garden shear.

Female. Wing length 1.76 mm, breadth 0.57 mm.

Similar to female but with usual sexual differences. Compound eyes broader, the distal five segments distinctly elongated, 12th and 13th segment slender, relative length of all flagellar segments 35: 18: 15: 15: 13: 15: 15: 18: 27: 25: 28: 30: 30; AR 1.03. Antenna 5-segmented, relative length of palp segments 11: 20: 30: 19: 25. Mandible with 7 teeth. Hind tibia with 6 terminal bristles and 19 comb teeth. Abdomen brown, two spermatheca, subequal, nearly spherical with short necks.

Holotype. ♀. **Paratypes.** 2♂, obtained by light trap in Nachitai District, Qinghai Province, 14-VII-2001.

Type specimens are deposited in the Medical Insect Collection, Institute of Microbiology and Epidemiology, Academy of Military Medical Sciences, Beijing.

Diagnosis. The male aedeagus and female spermathecae of this new species are similar to *P. downesi* Grogan *et* Wirth, but they can be separated by features of the aedeagus and the abdomen of females only having two pairs of short dorsal gland stems. The aedeagus in this new species is quite similar to *Palpomyia tuvae* Rem, 1972 but the ninth sternite is deeply concave, the middle lobe of the aedeagus is swollen at the tip, and the spermathecae of females are different, providing easy identification.

References

- Yu YX. 2006. *Insects of Ceratopogonidae in China. Vol. II.* Military Medical Sciences Press, Beijing, 1699 pp.
- Liu ZJ. 2011. *Vector Directory in Northwestern Region of China.* Military Medical Sciences Press, Beijing, 290 pp.
- Grogan WL & Wirth WW. 1979. The North American predaceous midges of the genus *Palpomyia* Meigen (Diptera: Ceratopogonidae). *Entomological Society of Washington*, 8: 1–123.
- Rem H. 1972. New species of Ceratopogonidae (Diptera) from south Siberia (in Russian). *Tartu Riikliku Ulukooli Toimetised*, 293: 62–90.
- Rem H. 1976. A synopsis of the *Palpomyia* of the USSR (Diptera: Ceratopogonidae). *Loodusuurijate Seltsi Aastaraamat*, 64: 172–197.
- Tokunaga M. 1939. Japanese biting midges of *Bebbia* and *Palpomyia* (Ceratopogonidae, Diptera). *Tenthredo*, 2(3): 273–311.
- Tokunaga M. 1966. Biting midges of the *Palpomyiinae* from New Guinea (Diptera: Ceratopogonidae). *Pacific Insecta*, 8(1): 101–152.